

MAT BLACK

Work Order ID 72021

Monday, July 18, 2011 8:48:20 AM



Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 7/18/2011 Start Qty: 1.00



Required Date: 8/10/2011 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2580-041

Rev.D DEO-D1

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG004

1002

N/A OK 11/08/12

110

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend I

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio 16

2-Cut tubes as per Dwg. D2580

3- scribe batch# in aft end of tube

DP

11-7-20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

120

0.00



Skidtubes

Memo

0.00

Skidtubes

1- Deburr ends and remove bending marks

2- Prepare tube for swaging as per QSI 002

1  
Wh.  
4/07/21

130

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

1  
8  
BE107/25

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

140

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Weld step D2576 as per Dwg. D2580 and QSI004  
A/R: Aluminum Rod

M115778

BE 11/07/25

2-Grind welds on step as per Dwg D2580

3-Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002  
and dwg. Hold x-bolt with DT9701 Use tube expander 1/2 x 17G to start  
expansion and finish with 1/2 x 18G to achieve dwg dimension.4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64",  
adjust stopper not to hit web. Deburr

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr

WELDED  
M115778

BE 11/07/27

BE 11/07/27

BB 11/07/25

PTO

150

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

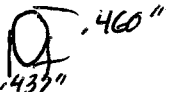



0.00

Quality Control

11.07.28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D205-1034-041 PAR #: N/A Fault Category: Knurling NCR: Yes No Yes DQA: A Date: 11/08/17  
 Resolution: Rework Disposition: Rework QA: N/C Closed: Yes Date: 11.8.17

NCR: <u>12021</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11-07-27	140	ASst most saddle hole was ovalized during counter boring 	 08/11/17	Remove crossbolt spacer and install new. Re center bore D2579 B72199 (X) A/R M115778	BE 11/07/17	 08/11/17 11/08/17	 11/07/17	
		Re: Process.						

NOTE: Date & initial all entries

# Work Order ID 72021

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Item Name: Replacement Skidtube

Setup Start

Stop

Start Date: 7/18/2011 Start Qty: 1.00

Required Date: 8/10/2011 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

MA 11 07 28 ①

170

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.

1 6 Jll 11/08/02

180



SprayPaint

Spray Painting

Powder Coat

Memo

0.00

0.00

1-Prime B  
as per QSI 005 4.2  
2-Paint as with  
Matt Black Imron - DUP47-1640-0.8GL  
B  
per QSI 005 4.2

Black Sandtex

start time: 2:15  
Oven: 320°F  
Finish: 2:45

M-L 1X ✓ 11/08/02

M 11/5/02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

190



QC

Quality Control

Operation  
Description

QC14- Inspect Spray Paint

Memo

Set Up/  
Run Hours

0.00

0.00

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

1.00 M w/08/03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Start Date: 7/18/2011 Start Qty: 1.00



Required Date: 8/10/2011 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	-----------	------------	------------	---------------	-------------

200

0.00



HandFinish

Hand Finishing

Memo

0.00

1-Install inserts &amp; wearplates &amp; Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R Sikaflex-291

Sikaflex expire date:

11/08

M116640

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step &amp; Aft Cap with Sikaflex. Clean excess adhesive

A/R Sikaflex-291

Sikaflex expire date:

11/08

M116040

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch:

M118313

IX ~~Q~~ M-11/08/03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Start Date: 7/18/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 8/10/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

8 11/08/04

(X)

220



Packaging

Packaging

Packaging

0.00

Memo

0.00

Identify and pack for shipping as per PPPD205-634-041

Location:

PPP Rev:

72733

Rev 12 C

230



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

CK 11/08/12  
LME  
11-08-12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

Monday, July 18, 2011 8:48:14 AM

Page 1

Work Order ID: 72021

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 7/18/2011

Required Date: 8/10/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30  
KJ IPP Rev P 10.02.19  
per PAR09-043 EC verified by:DD  
IPP Rev: O 06.02.28 Added paperwork EC  
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q  
10.12.01 as per chg003 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D4202-1		Manufactured	No			140	Each	443.0000	20	20			
---------	--	--------------	----	--	--	-----	------	----------	----	----	--	--	--



Spacer

D2574

Location

Loc Qty

Loc Code

LG002

443

66929

106

67129

196

67308

1

67430

140

D2580-1

Manufactured No

110

Each

1.0000

1

1



205 Skidtube bent detail

Location

Loc Qty

Loc Code

ST046

1

70785

1

D2576-3

Manufactured No

140

Each

44.0000

1

1



Step (maching detail)

Location

Loc Qty

Loc Code

LG

44

66156

44

B64/07/25

B70761 x12  
B72199 x8

① DP 11-7-20

BE 11/07/25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Monday, July 18, 2011 8:48:14 AM

Page 2

Work Order ID: 72021

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 7/18/2011

Required Date: 8/10/2011

Start Qty: 1.00

Required Qty: 1.00

D2855 Manufactured No

200 Each

41.0000

1

1



Cap

B72075



m-l 11/08/03

1X

Location

Loc Qty

Loc Code

FP007

41

53791

4

65519

2

65569

35

AN3-5A Purchased No

200 Each

1,055.000

2

2



Bolt

m-l 11/08/03

Location

Loc Qty

Loc Code

ST350

1055

115371

279

117423 ✓

776

AN960JD10L NAS1149D0332J Purchased No

200 Each

0.0000

2

2



Washer

M 117087



2X

m-l 11/08/03

2X

ALS7-1032-130 Purchased No

200 Each

1,075.000

50

50



Insert

m-l 11/08/03

Location

Loc Qty

Loc Code

ST282

1075

117717

1075

M 118386

50X

Monday, July 18, 2011 8:48:15 AM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Monday, July 18, 2011 8:48:16 AM

Work Order ID: 72021

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Page 4

5

D3566-1



Gasket

Manufactured No

200 Each

32.0000

2

2

Start Date: 7/18/2011

Required Date: 8/10/2011

Start Qty: 1.00

Required Qty: 1.00



m-f 11/08/03

## Location

## Loc Qty

## Loc Code

FP011

30

70769 ✓

18

71580

12

FP015

2

68924

2

2x

D3564-11



Wearshoe

Manufactured No

200 Each

4.0000

1

1



m-f 11/08/03

## Location

## Loc Qty

## Loc Code

FP019

4

67591 ✓

4

1x

D3564-13



Wearshoe

Manufactured No

200 Each

22.0000

1

1



m-f 11/08/03

## Location

## Loc Qty

## Loc Code

FP016

11

69280

11

FP017

11

71594 ✓

11

1x

D3564-9



Wearshoe

Manufactured No

200 Each

9.0000

1

1



m-f 11/08/03

## Location

## Loc Qty

## Loc Code

FP019

9

67590 ✓

4

69943 ✓

5

1x

Monday, July 18, 2011 8:48:16 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
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Work Order ID: 72021

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

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D3564-5

Manufactured No

200 Each

19.0000 1



Wearshoe



m-f 11/08/03

## Location

## Loc Qty

## Loc Code

FG	2	
34806	2	
FP019	17	
70864	17	

D2594-3

Manufactured No

200 Each

780.0000 16



O-Ring, 205 Skidtube



m-f 11/08/03

## Location

## Loc Qty

## Loc Code

FP-A	780	
65518	54	
66952	726	

D2594-1

Manufactured No

200 Each

233.0000 16



Plug, 205 Skidtube



m-f 11/08/03

## Location

## Loc Qty

## Loc Code

FP-A	233	
42807	28	
67441	7	
68943	198	

B72063

16x

Monday, July 18, 2011 8:48:17 AM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
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**NOTE:** Date & initial all entries



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

**RELEASED**  
07.06.28 *[Signature]*

**DEO ATTACHED**  
**UNDER REVIEW**

*P110670*  
RMV *07.06.30*

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *72621*

*07.07.28*

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

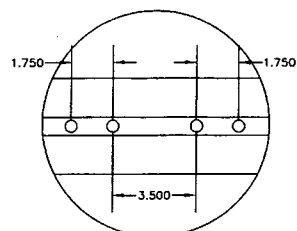
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

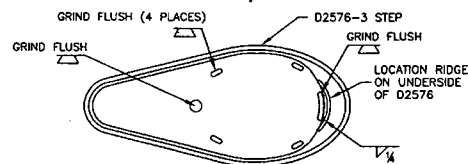
**NOTE:** Date & initial all entries



DETAIL A  
SCALE 5:24



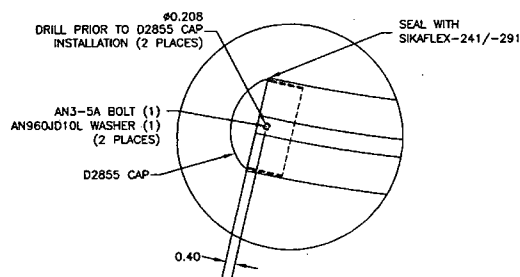
DETAIL B  
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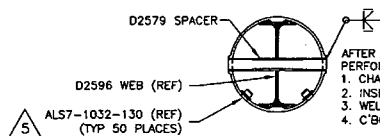
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RMV 07.06.30

DETAIL C  
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SECTION D-D  
SCALE 5:24

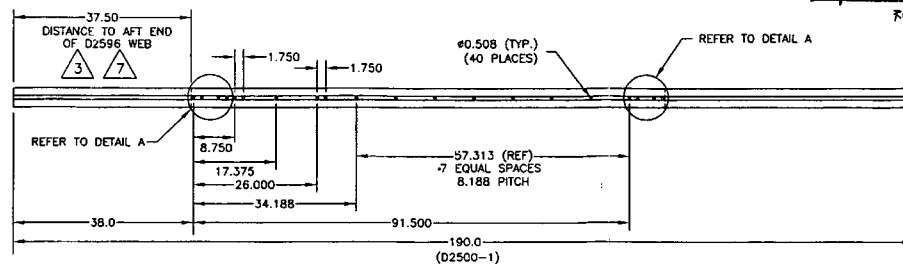


AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:  
1. CHAMFER HOLE 0.050 X 45°  
2. INSERT D2579 SPACER (20 PLACES)  
3. WELD INTO PLACE AND GRIND FLUSH  
4. C'BORE D2579 SPACER TO #0.437 X 1.00 DEEP

# D2580-041 NOTES

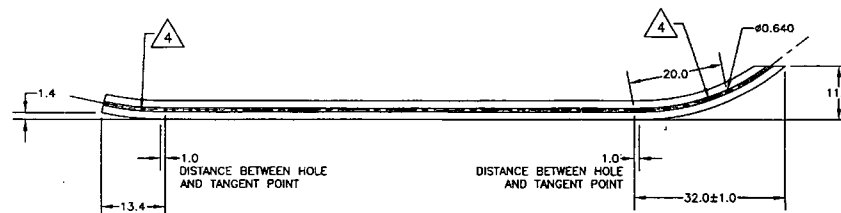
- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

D2580-1 DRILLING DETAIL

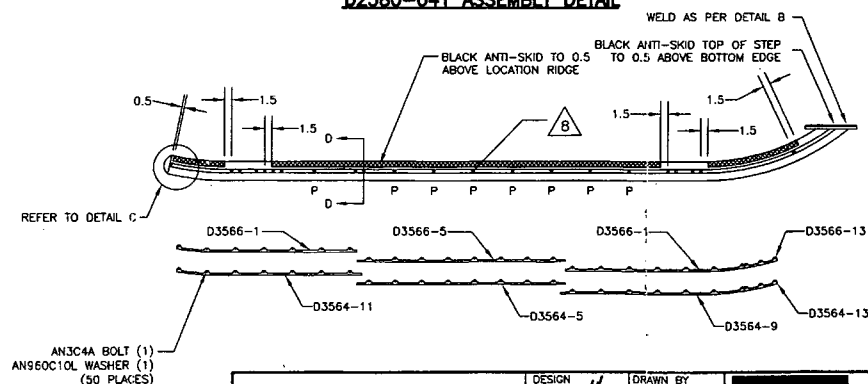


UNDER REVIEW  
07.06.30  
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D2580-1 BENDING AND CUTTING DETAIL



D2580-041 ASSEMBLY DETAIL



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CHECKED	APPROVED	DRAWING NO.	REV. 0
DATE		D2580	SHEET 2 OF 3
07.02.27		TITLE	SCALE
		205 SKIDTUBE ASSEMBLY	1:24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

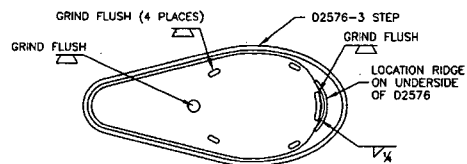
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

~~UNDER REVIEW~~

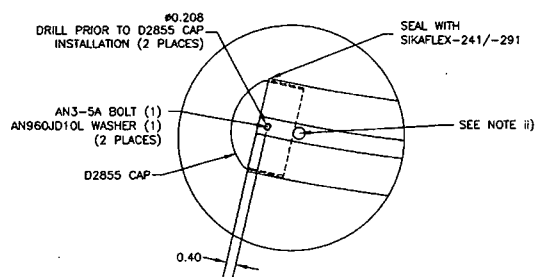


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07-06-28

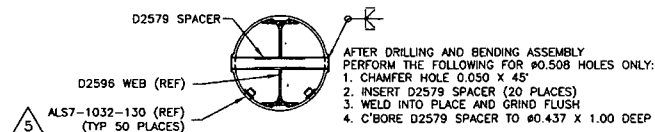


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**DETAIL G**  
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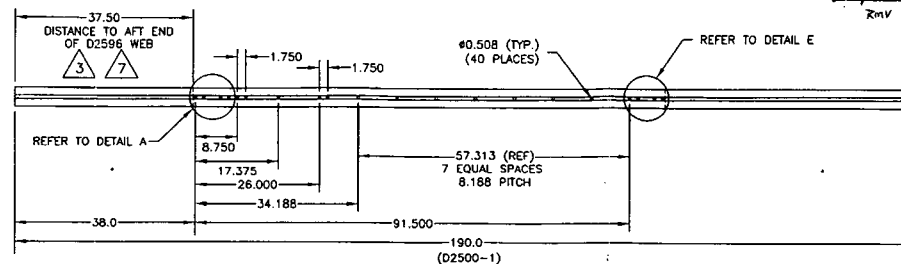


**SECTION H-H**  
SCALE 5:24

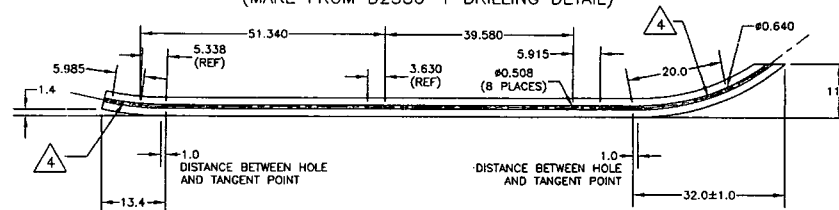


**D2580-045 NOTES**

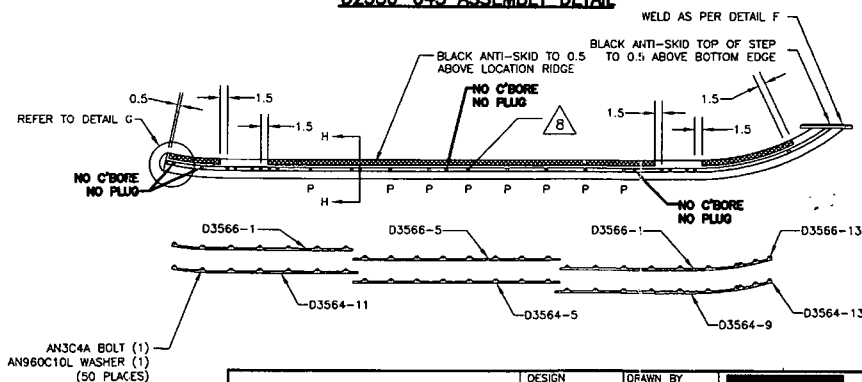
- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE  
WITH THE SPACER AT THIS LOCATION



**D2580-5 BENDING AND CUTTING DETAIL**  
(MAKE FROM D2580-1 DRILLING DETAIL)



D2580-045 ASSEMBLY DETAIL



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DESIGN

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DATE \_\_\_\_\_

07.02.27

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[illegible]**DART**

**DART AEROSPACE LTD.**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.

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SHEET 3 OF 3

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## ASSEMBLY

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Linda Lacelle

**From:** dshepherd@dartaero.com  
**Sent:** April 18, 2011 11:36 AM  
**To:** Linda Lacelle; Mike Petsche  
**Cc:** Bill Beckett; 'Chris Provencal'; 'Eric Charbonneau'  
**Subject:** Re: Alum. Solution Anneal - swaging

Makes sense to me ... We don't want to get caught short ... Make sure that if we do this, they are ident the old CHG number.

David

Sent from my BlackBerry device on the Rogers Wireless Network

**From:** "Linda Lacelle" <llacelle@dartaero.com>  
**Date:** Mon, 18 Apr 2011 11:21:10 -0400  
**To:** 'Mike Petsche' <mpetsche@dartaero.com>; <dshepherd@dartaero.com>  
**Cc:** 'Bill Beckett' <bbeckett@dartaero.com>; 'Chris Provencal' <cprovencal@dartaero.com>; 'Eric Charbonneau' <echarbonneau@dartaero.com>  
**Subject:** RE: Alum. Solution Anneal - swaging

I am ready to weld some up, I don't want to get into trouble with L/T's on these, any objections??  
LL

**From:** Mike Petsche [mailto:mpetsche@dartaero.com]  
**Sent:** April 18, 2011 10:42 AM  
**To:** 'Linda Lacelle'; dshepherd@dartaero.com  
**Cc:** 'Bill Beckett'; 'Chris Provencal'; 'Eric Charbonneau'  
**Subject:** RE: Alum. Solution Anneal - swaging

Well I'm not sure what to say.

it is my understanding that the swaging will still make sense even with the extra hoops we need to jump throu  
if there is still uncertainty on the delivery of the material, we CAN still weld them if we need to.

And while this might be less than "world class", couldn't we take some of our tubing that we have in stock and with the welder to knock down the temper a little? Ground clamp on one end, torch on the other.....BZZZZZZ

(I'm only sort of joking....because I bet it would work)

**From:** Linda Lacelle [mailto:llacelle@dartaero.com]  
**Sent:** April 18, 2011 9:44 AM  
**To:** dshepherd@dartaero.com; 'Mike Petsche'  
**Cc:** Bill Beckett; Chris Provencal; Eric Charbonneau  
**Subject:** RE: Alum. Solution Anneal - swaging  
**Importance:** High

CHG ~~108~~ D257

NO. 258

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliot  
Job number: B69986  
Part number: 205-634-041  
Description: 205  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminum  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Art Evans Date of Test Coupon 11.06.24  
Welder Barclay Elliot Date of Test Coupon 11/06/24

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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